DETAILED ACTION

Status of the Application

[1] Claims 1, 9-12, 17, 24, and 28-44 are pending in the application.

[2] Applicants' amendment to the claims, filed on 12/15/09, is acknowledged. This listing of the claims replaces all prior versions and listings of the claims.

[3] Receipt of a sequence listing filed via EFS-Web and a statement that no new matter has been added, filed on 12/15/09, is acknowledged.

[4] Applicant's remarks filed on 12/15/09 in response to the non-final Office action mailed on 9/15/09 have been fully considered and are deemed to be persuasive to overcome at least one of the rejections and/or objections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

[5] The text of those sections of Title 35 U.S. Code not included in the instant action can be found in a prior Office action.

Specification/Informalities

[6] The new matter objection to the specification in the disclosure of SEQ ID NO:7, 8, 9, 10, and 11 in the sequence listing filed on 1/4/08 is withdrawn in view of the substitute sequence listing filed on 12/15/09, which deletes SEQ ID NO:7, 8, 9, 10, and 11. The sequences of SEQ ID NO:1-6 of the substitute sequence listing filed on 12/15/09 appear to be adequately supported by the original sequence listing filed on 12/21/00.

Claim Objections

[7] The objection to claim 29 in the recitation of “DSN12891” is withdrawn in view of the instant claim amendment to replace the noted term with "DSM 12891".

[8] Claims 9-12, 17, 28-29, and 32 are newly objected to in the recitation of "A method" and in order to improve claim form and consistency and because a majority of the dependent claims recite “The method”, it is suggested that the "A method" be amended to recite "The method".

Claim Rejections - 35 USC § 112, Second Paragraph

[9] Newly added claim 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 44 provides for the use of a culture as obtained in the method of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

[10] Newly added claim 44 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 44 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112, First Paragraph

[11] The new matter rejection of claim 12 under 35 U.S.C. 112, first paragraph, is maintained for the reasons of record and the reasons set forth below. In the interest of brevity, it is noted that the rejection was fully explained in a prior Office action. See [13] beginning at p. 4 of the Office action mailed on 9/15/09.

RESPONSE TO ARGUMENT: At p. 8 of the instant remarks, applicant argues the amendment to claim 12 to recite, "the purine or thymidine auxotrophic bacterial comprises a genetically modified strain transformed with a plasmid including a DNA sequence encoding an ATPase", which, according to p. 7, top of the instant remarks, is supported by original claim 14.

Applicant's argument is not found persuasive. Original claim 14 as filed on 12/21/00 recites, "the genetically modified strain has, relative to its parent strain, an enhanced ATPase activity". Here, the genus of genetically modified strains of original

claim 14 fail to provide adequate descriptive support for the sub-genus of genetically modified strains transformed with a plasmid including a DNA encoding an ATPase. Moreover, the examiner has reviewed the specification and can find only a single disclosed method for enhancing ATPase activity according to claim 14, *i.e.,* the use of a regulatable promoter (paragraph bridging pp. 11-12), which fails to provide adequate descriptive support for the sub-genus of genetically modified strains transformed with a plasmid including a DNA encoding an ATPase. Applicant is invited to show support for the limitations of claim 12.

Claim Rejections - 35 USC § 102/103

[12] The rejection of claims 1, 9-10, 17, 24, 30, 33, 36-37, and 41 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dickely et al. (US Patent 5,691,185; cited as reference A in the Form PTO-892 mailed on 3/27/02; hereafter "Dickely") as evidenced by Groboillot et al. (*Biotechnol. Bioengineer.* 42:1157-1163, 1993; hereafter "Groboillot") is withdrawn in view of applicant's amendment to claims 9, 30, and 31 to require the auxotrophic bacterial strain be "non-proliferating" in the milk or dairy flavoring and/or product for cheese flavoring starting material. While Dickely teaches culturing the *pur-* strain DN209/pFDi19 in milk, the culturing is conducted in the presence of hypoxanthine as a purine source for about 100 generations. As such, the DN209/pFDi19 strain of Dickely is not non-proliferating in the milk.

[13] The rejection of Claim(s) 31 and 38 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dickely as evidenced by Luksas (US Patent 3,720,520; hereafter "Luksas") is withdrawn in view of applicant's amendment to claims 9, 30, and 31 to require the auxotrophic bacterial strain be "non-proliferating" in the milk or dairy flavoring and/or product for cheese flavoring starting material. While Dickely teaches culturing the *pur*- strain DN209/pFDi19 in milk, the culturing is conducted in the presence of hypoxanthine as a purine source for about 100 generations. As such, the DN209/pFDi19 strain of Dickely is not non-proliferating in the milk.

Claim Rejections - 35 USC § 103

[14] Claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 are newly rejected under 35 U.S.C. 103(a) as being unpatentable over Dickely (*supra*) as evidenced by Luksas (*supra*). The instant rejection is necessitated by the instant claim amendment to require the auxotrophic bacterial strain in claims 9, 30, and 31 to be "non-proliferating" in the milk or dairy flavoring and/or product for cheese flavoring starting material.

Dickely discloses that milk is a selective medium for isolating purine and pyrimidine auxotrophic mutants of lactic acid bacteria and teaches a need for isolating purine and pyrimidine auxotrophic mutants of lactic acid bacteria lactic (column 30, lines 48-58). Dickely teaches isolation of a purine auxotrophic (*pur*-) strain of *Lactococcus lactis* strain, DN209 (column 27, lines 2-3) and teaches milk is a medium that does not contain nucleotide precursors in amounts sufficient for growth of purine auxotrophs

(column 11, lines 52-54). Although Dickely discloses that milk is a selective medium for purine and pyrimidine auxotrophic mutants of lactic acid bacteria, that DN209/pFDi19 strain is unable to grow in milk not containing a purine source (column 27, lines 59-60), and teaches a method of culturing a DN209/pFDi19 transformant in milk supplemented with hypoxanthine as a purine source (column 27, lines 48-55), Dickely does not expressly teach culturing the DN209/pFDi19 strain in milk in the absence of a purine source.

However, at the time of the invention, it would have been obvious to one of ordinary skill in the art to culture a *pur-* strain of lactic acid bacteria, *e.g.,* the DN209/pFDi19 strain, in milk without purine supplementation. One would have been motivated to do this in order to select and confirm that a strain is a *pur-* strain in accordance with the teachings of Dickely. One would have had a reasonable expectation of success to culture a *pur-* strain of lactic acid bacteria, *e.g.,* the DN209/pFDi19 strain, in milk without purine supplementation because of the results of Dickely. Therefore, the methods of claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 would have been obvious to one of ordinary skill in the art at the time of the invention.

Regarding the limitations of "keeping the milk under conditions where the bacterial culture is able to acidify the milk" and "keeping the milk under conditions where the purine or thymidine auxotrophic bacterial strain is able to ferment the milk" in claims 1 and 30 respectively, although the reference of Dickely does not expressly teach that culturing the DN209/pFDi19 strain in milk results in acidifying or fermenting of the milk,

this would have been a necessary result of culturing the DN209/pFDi19 strain in milk in the absence of purine.

Regarding the limitation of "the purine or thymidine auxotrophic bacterial strain is a strain that increases the size of its cells without mitosis when cultured in milk" in claim 17, based on the specification disclosure at p. 12, lines 11-17, this would appear to be a necessary characteristic of the purine auxotrophic DN209/pFDi19 strain of Dickely.

While Dickely does not characterize milk as a product for cheese flavoring, evidentiary reference Luksas acknowledges that milk is considered to be a product for cheese flavoring (column 2, lines 23-30).

Regarding the limitation of "maintaining the thus-obtained inoculated dairy flavoring and/or product for cheese flavoring starting material under such conditions that the bacterial strain of the bacterial culture is metabolically active" in claim 31, this would appear to be a necessary characteristic of the purine auxotrophic DN209/pFDi19 strain of Dickely.

RESPONSE TO ARGUMENT: Although applicant's arguments addressing Dickely as evidenced by Luksas are directed to the rejections under 35 U.S.C. 102/103, to the extent applicant's arguments are relevant to the new rejection under 35 U.S.C. 103(a), applicant's arguments are addressed as follows. Beginning at p. 8 of the instant remarks, applicant argues the examiner's inherency rationale is flawed. According to applicant, acidification or fermentation can only occur if a sufficient number of bacteria are introduced to the milk and because Dickely is silent as to the number of bacteria

used to inoculate the milk, one cannot conclude that the method of contacting milk with a purine auxotroph as disclosed by Dickely necessarily results in acidification or fermentation of the milk. Applicant argues that in the absence of an express disclosure by Dickely as to the number of inoculated bacteria, one can speculate that the inoculum used in Dickely "may have been quite low".

Applicant's argument is not found persuasive. Applicant appears to take the position that the claims *require* fermentation or acidification of the milk to occur in order to satisfy the claim limitations. However, given a broad and reasonable interpretation in accordance with MPEP 2111, the claims do not require acidification or fermentation. Claim 1 only requires that the milk be kept "under *conditions* where the bacterial culture is *able to acidify the milk*"; claim 30 only requires the milk be kept "under *conditions* where the purine or thymidine auxotrophic bacterial strain is *able to ferment the milk*"; and claim 31 only requires the dairy flavoring and/or product for cheese flavoring starting material be maintained "under such *conditions* that the bacterial strain…is *able to acidify or ferment dairy flavouring and/or product for cheese flavouring starting material*" (emphasis added). Put another way, while the claims limit the particular *conditions* under which the milk or dairy flavoring and/or product for cheese flavoring starting material is kept or maintained, the claims do not require fermentation or acidification of milk. While it is acknowledged the preambles of claims 1 and 30 recite "method of fermenting milk" and "method for keeping the capability of a bacterial strain to ferment milk", respectively, the phrases "of fermenting milk" and "to ferment milk" are

interpreted as intended use limitations of the active process steps. As such, applicant is arguing a limitation that does not appear in the claims.

Because the claims do not require fermentation or acidification, the examiner maintains that the method of Dickely necessarily results in “keeping the milk under conditions where the bacterial culture is able to acidify the milk"; “keeping the milk under conditions where the purine or thymidine auxotrophic bacterial strain is able to ferment the milk”; and “maintaining the thus-obtained inoculated dairy flavouring and/or product for cheese flavouring starting material under such conditions that the bacterial strain…is able to acidify or ferment dairy flavouring and/or product for cheese flavouring starting material”. Although applicant takes the position that the method of Dickely does not necessarily result in acidification or fermentation of milk, there is no dispute that the method of Dickely results in “keeping the milk under conditions where the bacterial culture is able to acidify the milk"; “keeping the milk under conditions where the purine or thymidine auxotrophic bacterial strain is able to ferment the milk”; and “maintaining the thus-obtained inoculated dairy flavouring and/or product for cheese flavouring starting material under such conditions that the bacterial strain…is able to acidify or ferment dairy flavouring and/or product for cheese flavouring starting material” as recited in the claims.

Even assuming *arguendo* the claims were limited to requiring fermentation or acidification, based on the instant remarks, it appears applicant takes the position that the claims require a minimum level of bacteria to be present in order to achieve fermentation or acidification. However, the claims require no particular inoculum or level

of culture and the examiner maintains the position that the method of Dickely would *necessarily* result in acidification or fermentation of the milk, particularly when the claims are interpreted in light of the specification. According to the specification, the term "fermentation" means "any aerobic or anaerobic breakdown of organic compounds by a bacterial culture with the production of an end product" (specification at p. 6, lines 4-5), where the phrase "organic compounds" is interpreted as meaning the plural of organic compound, *i.e.,* more than one organic compound molecule, including two organic compounds. In line with this definition, the examiner has interpreted "acidifying" to mean aerobic or anaerobic breakdown of organic compounds by a bacterial culture with the production of an acidic end product. Since the strain of Dickely is a lactic acid bacteria and maintains metabolic activity in milk, it would necessarily breakdown at least two organic compound molecules with the production of an end product, *e.g.,* lactic acid. Applicant has presented no objective evidence to support the position that the method of Dickely would not result in breakdown of at least two organic compound molecules for production of an end product, *e.g.,* lactic acid.

According to applicant, Dickely states that the *pur-* strain "cannot grow in milk not containing a purine source" and therefore the references teach away from any imaginable modification that would be within the scope of the present claims.

Applicant's argument is not found persuasive. Even though Dickely does not expressly teach culturing DN209/pFDi19 strain in milk without added hypoxanthine, one of ordinary skill in the art would clearly recognize that such culturing was practiced by

Dickely because, as noted by applicant, Dickely acknowledges that the DN209/pFDi19 strain "cannot grow in milk not containing a purine source".

[15] Claim(s) 11, 34, 36, 39, and 41-42 are newly rejected under 35 U.S.C. 103(a) as being unpatentable over Dickely (*supra*) as evidenced by as evidenced by Luksas (*supra*) as applied to claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 above and further in view of Barach et al. (US Patent 4,294,930; cited as reference B in the Form PTO-892 mailed on 3/27/02; hereafter "Barach") as evidenced by Groboillot et al. (*Biotechnol. Bioengineer.* 42:1157-1163, 1993; hereafter "Groboillot"). The instant rejection is necessitated by the instant claim amendment to require the auxotrophic bacterial strain in claims 9, 30, and 31 to be "non-proliferating" in the milk or dairy flavoring and/or product for cheese flavoring starting material.

The relevant teachings of Dickely as applied to claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 are set forth above. Dickely does not specifically teach the CFU/mL of the culture of the DN209/pFDi19 strain added to milk.

Barach teaches that when culturing a microbe in milk, it is desirable to use 10^8 CFU/mL (column 1, lines 14-19).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Dickely and Barach to propagate the DN209/pFDi19 strain in a medium comprising purine and add 10^8 CFU/mL of the DN209/pFDi19 strain to milk with and without hypoxanthine. One would have been motivated to propagate the DN209/pFDi19 strain in a medium comprising purine in order to achieve 10^8

CFU/mL of the culture for growth analysis. One would have been motivated to use 10^8 CFU/mL of the culture of the DN209/pFDi19 strain because Barach teaches this is desirable. One would have had a reasonable expectation of success to propagate the DN209/pFDi19 strain in a medium comprising purine and to use 10^8 CFU/mL of the culture of the DN209/pFDi19 strain in growth analysis using milk with and without added hypoxanthine because of the results of Dickely and Barach. Therefore, the method of claims 11, 34, 36, 39, and 41-42 would have been obvious to one of ordinary skill in the art at the time of the invention.

Regarding the limitation of "whereby the milk is acidified to a pH less than or equal to 5.0" in claims 36 and 41, according to the specification, a purine auxotrophic strain of *Lactococcus lactis* present in the same medium as that of Dickely "was able to acidify milk at least to pH 5.0" (p. 17, lines 18-19). Because the generation time for *Lactococcus lactis* in milk is over 1 hour as evidenced by Groboillot at p. 1162, column 1, bottom, by culturing the DN209/pFDi19 strain of Dickely for 100 generations, it is the examiner's position that after 100 generations of DN209/pFDi19 strain, the milk would have been acidified at least to a pH of 5.0.

RESPONSE TO ARGUMENT: Beginning at p. 11 of the instant remarks, applicant argues the reference of Barach fails to cure the alleged deficiencies of Dickely, including the alleged failure of the reference to teach or suggest acidification of milk by a non-replicating strain. Regarding claims 36 and 41, applicant argues at the

paragraph bridging pp. 9-10 that acidification to a pH below 5.5 is only achieved with a highest inoculum as shown in Figure 1.

Applicant's argument is not found persuasive. As noted above, at least claims 11, 34, 39, and 42 do not positively require acidification of the milk, only that the milk is kept under conditions where the bacterial culture is *able to* acidify the milk. Claims 36 and 41 appear to positively require appear to require acidification by reciting, "the milk *is acidified* to a pH less than or equal to 5.0" and "the dairy flavouring and/or product for cheese flavouring starting material *is acidified* to a pH less than or equal to 5.0" (emphasis added), respectively, in view of a broad and reasonable interpretation of the term "fermentation" as defined in the specification (specification at p. 6, lines 4-5), it is the examiner's position that the DN209/pFDi19 strain in milk without added hypoxanthine would have necessarily acidified, *i.e.,* aerobic or anaerobic breakdown of at least two organic compounds by a bacterial culture with the production of an acidic end product, the milk to a pH of 5.0 or less. This is in accordance with MPEP 2112.02, which states, "[w]hen the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process".

Applicant further argues that one would not have combined the references of Dickely and Barach for acidification or fermentation of milk because Dickely teaches the DN209/pFDi19 strain is non-replicating in milk, while Barach is concerned with fermentation resulting from inoculation of a replicating strain.

Applicant's argument is not found persuasive. As noted above, even though Dickely does not expressly teach culturing DN209/pFDi19 strain in milk without added hypoxanthine, one of ordinary skill in the art would clearly recognize that such culturing was practiced by Dickely because, as noted by applicant, Dickely acknowledges that the DN209/pFDi19 strain "cannot grow in milk not containing a purine source". Although one of ordinary skill in the art would have recognized that a *pur*- strain of lactic bacteria is non-replicating in milk without added purine, the strain *is* a replicating strain in milk with the addition of purine. As such, in selecting for a *pur*- strain, one would have used the selection medium of milk with and without a purine source and thus would have used the desired inoculum as taught by Barach.

[16] Claim(s) 28 is newly rejected under 35 U.S.C. 103(a) as being unpatentable over Dickely (*supra*) as evidenced by as evidenced by Luksas (*supra*) as applied to claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 above and further in view of Nilsson et al. (*Mol. Gen. Genet.* 235:359-364, 1992; cited as reference 7 in the IDS filed on 10/9/03; hereafter "Nilsson").

The relevant teachings of Dickely as applied to claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 are set forth above. Dickely does not teach or suggest screening for purine auxotrophy of a culture of DN105 using milk.

Nilsson teaches purine auxotrophic mutants of *L. lactis,* including strain DN105 (p. 360, column 2, bottom). Nilsson does not teach milk as a purine auxotroph selection medium.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Dickely and Nilsson to culture DN105 in milk without purine. One would have been motivated to do this because Dickely teaches milk lacks purines and is a medium for screening for purine auxotrophy. One would have had a reasonable expectation of success to culture DN105 in milk without purine because of the results of Dickely and Nilsson. Therefore, the method of claim 28 would have been obvious to one of ordinary skill in the art at the time of the invention.

RESPONSE TO ARGUMENT: At p. 12 of the instant remarks, applicant argues the reference of Nilsson fails to cure the alleged deficiencies of Dickely, including the alleged failure of the reference to teach or suggest acidification of milk by a non-replicating strain.

Applicant's argument is not found persuasive. As noted above, at least claims 11, 34, 39, and 42 do not positively require acidification of the milk, only that the milk is kept under conditions where the bacterial culture is *able to* acidify the milk. Even assuming *arguendo* the claims positively required acidification of the milk, it is the examiner's position that the DN105 strain in milk without added purine would have necessarily acidified, *i.e.,* aerobic or anaerobic breakdown of at least two organic compounds by a bacterial culture with the production of an acidic end product, the milk. This is in accordance with MPEP 2112.02, which states, "[w]hen the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process".

[17] Claim 32 is newly rejected under 35 U.S.C. 103(a) as being unpatentable over Dickely (*supra*) as evidenced by as evidenced by Luksas (*supra*) as applied to claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 above and further in view of Jochimsen et al. (*Mol. Gen. Genet.* 143:85-91, 1975; hereafter "Jochimsen").

The relevant teachings of Dickely as applied to claims 1, 9-10, 17, 24, 30, 33, 37, and 43-44 are set forth above. Dickely does not teach or suggest screening for purine auxotrophy of a culture of *E. coli* using milk.

Jochimsen teaches selecting *E. coli* purine auxotrophs (*e.g.,* p. 88, column 1). Jochimsen does not teach milk as a selection medium.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Dickely and Jochimsen to select *E. coli* purine auxotrophs using milk without purine as a selection medium. One would have been motivated to do this because Dickely teaches milk lacks purines and is a medium for screening purine auxotrophy. One would have had a reasonable expectation of success to select *E. coli* purine auxotrophs using milk without purine as a selection medium because of the results of Dickely and Jochimsen. Therefore, the method of claim 32 would have been obvious to one of ordinary skill in the art at the time of the invention.

Conclusion

[18] Status of the claims:

- Claims 1, 9-12, 17, 24, and 28-44 are pending.

- Claims 1, 9-12, 17, 24, 28, 30-34, 36-39, and 41-44 are rejected.

- Claims 29, 35, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

- Claims 35 and 40 appear to be free of the prior art of record because there is no evidence that the milk of the reference of Dickely contained a bacteriophage and the examiner can find no teaching or suggestion to modify the method of Dickely to culture a *pur-* strain of bacteria in milk with a bacteriophage.

- Claim 29 appears to be free of the prior art of record because the examiner can find no teaching or suggestion of the *L. lactis* strain MBP71.

- Claim 12 appears to be free of the prior art of record because the examiner can find no teaching or suggestion to culture a purine or thymidine auxotrophic bacterial strain transformed with a plasmid including a DNA sequence encoding an ATPase in milk without purine.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Steadman whose telephone number is 571-272-0942. The examiner can normally be reached on Mon to Fri, 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David J. Steadman/
Primary Examiner, Art Unit 1656